

**REMARKS**

**1. Declaration**

The Office Action has indicated that the Declaration is defective. A substitute Declaration is being sought and will be filed when executed.

**2. Restriction**

Restriction has been required to one of two identified groups of claims:

- I. Claims 41 – 45; and
- II. Claims 46 – 48.

Applicants affirm the election to prosecute the claims of Group I and have accordingly canceled Claims 46 – 48 without prejudice or disclaimer.

**3. Benefit of Earlier Filing Date**

The Office Action indicates that the claim for the benefit of an earlier filing date under 35 U.S.C. §120 is defective because a lack of copendency with U.S. Pat. Appl. No. 09/839,360. Applicants respectfully disagree with this assertion. U.S. Pat. Appl. No. 09/839,360 has matured into U.S. Pat. No. 6,755,150 (“the ‘150 patent”), the front page of which is attached as Exhibit 1. The ‘150 patent issued on June 29, 2004, before the January 30, 2004 filing date of the current application (*see* Exhibit 2, Official Filing Receipt). The current application was thus copending with U.S. Appl. No. 09/839,360 at least between January 30, 2004 and June 29, 2004, satisfying the copendency requirement set forth in 35 U.S.C. §120 as having been “filed before the patenting or abandonment of ... the first application.”

#### 4. Title

The title has been amended for greater consistency with the claims.

#### 5. Claim Rejections

Claims 41 – 44 have been examined. Claims 41 – 44 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Pat. No. 5,565,249 (“Kurihara”); Claims 41 and 45 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Pat. No. 6,150,628 (“Smith”); Claim 45 stands rejected under 35 U.S.C. §103(a) as unpatentable over Kurihara in view of Smith; Claims 41 – 44 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Pat. Publ. No. 2002/0168466 (“Tapphorn”) in view of Kurihara; and Claim 45 stands rejected under 35 U.S.C. §103(a) as unpatentable over Tapphorn in view of Kurihara, and further in view of Smith.

The claims have been amended to recite aspects of the invention more specifically. In particular, independent Claim 41 has been amended to recite that the inner nozzle is disposed within the outer nozzle and that both the outer and inner nozzles are disposed substantially symmetrically about a center axis. In addition, the claim language clarifies that the conduit passes substantially linearly through the inner nozzle along the center axis. Support for such amendments is provided in Fig. 7A of the application and in related discussion of that drawing at p. 23, l. 5 – p. 24, l. 29 of the application. Certain dependent claims have been added that are also supported by such disclosure. Claims 43 and 44 have been amended to provide clear structural recitations.

Independent Claim 41 is respectfully believed to be patentable over the cited art. First, Kurihara does not disclose a conduit passing substantially linearly through an inner nozzle along a center axis. The structure of Kurihara uses passages, such as those between anodes 2a and 2b or those between anodes 2b and 2c, that include bends. It is noted that these bends are a consequence of the nonlinear structure of the anodes 2 themselves, which use such a nonlinear geometry to accommodate the arc generation used by Kurihara (*see, e.g.*, Kurihara, Figs. 3, 8, 9, and similar drawings showing arc 5). Distinctions with such conventional arc-type structures are further discussed in the application at p. 24, ll. 5 – 12.

With the correspondence of structures identified in the Office Action, it is plain that Smith does not disclose a structure in which the inner nozzle is disposed within the outer nozzle as now recited in independent Claim 41.

It is respectfully noted that Tapphorn is not prior art to the application. As explained above, the application properly claims the benefit of an earlier filing date of April 20, 2001, which predates Tapphorn's earliest claimed date of Tapphorn of April 24, 2001. It is additionally noted that there is no motivation to make the proposed modification to Tapphorn. Tapphorn already describes an arrangement in which capacitive coupling is used for plasma generation with an RF generator 13 and matching impedance network 14 to provide the substrate with an anode potential and a nozzle with a cathode potential (*see, e.g.*, Tapphorn, ¶90). There is no indicated desirability of substituting such capacitive plasma generation with a toroidal plasma-generator arrangement, and merely adding the toroidal transformer core as proposed in the Office Action would, in any event, not by itself provide sufficient structure for such toroidal plasma generation.

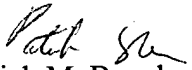
For these reasons, independent Claim 41 is believed to be patentable. The dependent claims are also believed to be patentable by virtue of their dependence from a patentable claim.

### CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

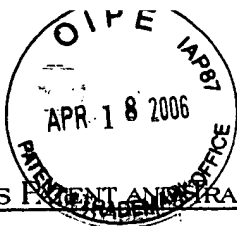
If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

  
Patrick M. Boucher  
Reg. No. 44,037

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: 303-571-4000  
Fax: 415-576-0300  
PMB:pmb

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10/769,216	01/30/2004	1763	770	A5152D5/T39550	16	8	2

CONFIRMATION NO. 9570

## FILING RECEIPT



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Patent Counsel, M/S 2061  
 APPLIED MATERIALS, INC.  
 Legal Affairs Department  
 P.O. Box 450A  
 Santa Clara, CA 95052

Date Mailed: 06/15/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Canfeng Lai, Fremont, CA;  
 Michael S. Cox, Davenport, CA;  
 Peter K. Loewenhardt, San Jose, CA;  
 Tsutomu Tanaka, Santa Clara, CA;  
 Shamouil Shamouilian, San Jose, CA;

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 JUN 23 2004

## Assignment For Published Patent Application

Applied Materials, Inc., Santa Clara, CA;

## Domestic Priority data as claimed by applicant

This application is a DIV of 09/839,360 04/20/2001 PAT 6,755,150

## Foreign Applications

If Required, Foreign Filing License Granted: 06/14/2004

Projected Publication Date: 09/23/2004

Non-Publication Request: No

Early Publication Request: No

CC: DOCKETING

Title

Multi-core transformer plasma source

Preliminary Class

156

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Title 37, Code of Federal Regulations, 5.11 & 5.15**

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